

wherein  $R^1$  and  $R^2$  are the same or different from each other and each represents a hydrogen atom, an alkyl group or a cycloalkyl group;  $R^3$  represents a hydrogen atom or a methyl group;  $R^4$  represents a hydrogen atom, a halogen atom, an alkyl group, an oxygen-containing group, an amino group or an N-substituted amino group; n represents an integer of not less than 1; with proviso that all  $R^4$ s are not concurrently hydrogen atoms, and  $R^4$  may be varied according to n; the Z ring represents a monocyclic or polycyclic alicyclic hydrocarbon ring; in formula (1),  $R^1$  and  $R^2$  may, jointly and together with the adjacent carbon atom, form an alicyclic hydrocarbon ring,

provided that the acid-responsive compound is the compound represented by the formula (2),  $R^1$  represents an alkyl group or a cycloalkyl group and Z represents a monocyclic or polycyclic alicyclic hydrocarbon ring selected from the group consisting of cycloalkanes, spiro hydrocarbon rings, ring assembly hydrocarbon rings, fused-ring hydrocarbon rings, and bridged rings,

wherein the bridged ring is selected from the group consisting of tricyclic hydrocarbon rings, tetracyclic hydrocarbon rings and hydrogenated dimers or dienes.